

REMARKS

The Applicant wishes to thank the Examiner for his examination of the present application. Claims 1, 27, 28, and 31 and 39 have been amended and new claims 47 and 48 have been added. Claims 1 and 3-48 are pending in the case. No new matter has been added.

35 U.S.C. §102

Claims 1, 12-14, 16-18, 26, 28-31 and 39-43 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,681,354 (Eckhoff). As amended, claim 1 is directed to an implant for implantation on a femoral condyle. The implant includes, in part, a bone-facing implant surface that opposes at least a portion of the femoral condyle and that is configured to substantially match the shape of at least a portion of an uncut articular surface of the femoral condyle and to abut the portion when the implant is implanted on the femoral condyle.

Eckhoff does not disclose such an implant. For example, Eckhoff does not disclose a bone-facing implant surface configured to substantially match the shape of an uncut portion of the femoral condyle. Rather, Eckhoff is directed to an asymmetric distal femoral prosthetic device having a sulcus angled laterally upward and preferably laterally displaced from the midline (see Eckhoff at abstract). The text of Eckhoff fails to address the shape of the bone-facing implant surface. Moreover, while Fig. 1 of Eckhoff shows the femoral prosthetic device 10, nowhere is there any indication that the bone-facing implant surface has a three-dimensional shape that substantially abuts and matches an uncut articular surface.

To address this shortcoming of Eckhoff, the office action states that “the inner surface of [the Eckhoff] implant has at least flange portions that at least

substantially match the articulating surface of the femoral condyles.” (See Office Action page 6.) Eckhoff does not support that statement, however. To the contrary, Eckhoff explicitly discloses that the device shown in FIG. 1 is merely selected from an inventory of sizes to achieve the best available approximation of the sulcus angle. According to Eckhoff, the device “is used in *standard arthroplasty procedures as known to the art.*” (See col. 5, lines 66 to col. 6 line 4, emphasis added.) Eckhoff continues by explaining that a selection of components are available with varying sulcus angles, and the component “that most closely approximates the sulcus angle” is selected. (Id.) This is similar to the selection of knee implants from a variety of sizes as has been commonly performed in the art. Thus, Eckhoff fails to disclose all of the elements of claim 1 for at least two reasons. First, Eckhoff discloses approximating a sulcus angle only, and not a portion of a surface. Second, the bone-facing surface, at the sulcus, at the flange portions or elsewhere, is not substantially matched as claimed.

The office action also suggests that Fig. 2 of Eckhoff shows a surface cut and a constant thickness over the implant. Applicants respectfully disagree. Figure 2 shows only a femur and not an implant. According to the patent, “Fig. 2 shows a traditional image of a distal femur demonstrating the symmetric placement of the sulcus relative to the femoral condyles” (column 4, lines 11-13). Figure 2 does not show a bone cut or a device requiring a bone cut.

The office action also states at page 5 that “‘having a 3-D shape that substantially matches the shape of [at] least a portion of the uncut articular surface’ does not describe any particular structure that is patentable over the prior art”, because “it is well known in the art and also makes intuitive sense to

make orthopedic implants that have bone facing surfaces that match the surface that they abut.” The applicants have amended the claim to more particularly claim the structure, and the applicants note that none of the cited art discloses the claimed structure, i.e., substantially matching an uncut bone surface.

Since Eckhoff does not teach or suggests all of the elements of claim 1, amended claim 1 is not anticipated under 35 U.S.C. §102(b) by Eckhoff. Claims 12-14, 16-18, 26 and 40-43 depend from claim 1 and are allowable over Eckhoff for at least the same reason as claim 1 and are further allowable in view of the additional limitations set forth therein.

Independent claim 28 and dependent claims 29 and 30, as amended, are directed to an implant for implantation on a femoral condyle. The implant includes, in part, a bone-facing implant surface that opposes at least a portion of the femoral condyle and the trochlea, when the implant is implanted on a femoral condyle, that is configured to substantially match the shape of at least a portion of an uncut articular surface of the femoral condyle and to abut the portion when the implant is implanted on the femoral condyle. The implant further includes a joint facing surface that is configured to oppose at least a portion of a weight bearing tibial surface and patella when the implant is implanted on a femoral condyle.

Eckhoff does not disclose such an implant. For example, as stated above, Eckhoff does not disclose a bone-facing implant surface configured to substantially match the shape of an uncut portion of the femoral condyle. Rather, Eckhoff is directed to an asymmetric distal femoral prosthetic device having a sulcus angled laterally upward and preferably laterally displaced from the midline (see Eckhoff at abstract). The text of Eckhoff fails to address the

shape of the bone-facing implant surface. Moreover, while Fig. 1 of Eckhoff shows the femoral prosthetic device 10, nowhere is there any indication that the bone-facing implant surface has a three-dimensional shape that substantially abuts and matches an uncut articular surface.

Thus, claims 28-30 are allowable over Eckhoff for at least the same reasons as claim 1, as amended, and are further allowable in view of the additional limitations set forth therein.

Independent claim 31 is directed to an implant for implantation on a femoral condyle, the implant including, in part, a bone-facing implant surface and a joint-facing implant surface. At least a portion of the joint-facing implant surface has a three-dimensional shape that is configured to substantially match the shape of at least a part of the uncut articular surface of the portion of the femoral condyle opposed by at least a portion of the bone-facing surface of the implant.

Nowhere does Eckhoff disclose that at least a portion of the joint-facing implant surface has a three-dimensional shape that is configured to substantially match the shape of at least a part of the uncut articular surface of the portion of the femoral condyle opposed by at least a portion of the bone-facing surface of the implant, as required by claim 31. As described above, Eckhoff is directed at an asymmetric distal femoral prosthetic device having a sulcus angled laterally upward and preferably laterally displaced from the midline (see Eckhoff at abstract). Other than addressing the displacement of the sulcus, Eckhoff fails to address the shape of the joint-facing implant surface, much less that the joint-facing surface has a three-dimensional shape that is configured to substantially match the shape of at least a part of the uncut articular surface of the portion of

the femoral condyle opposed by at least a portion of the bone-facing surface of the implant. Thus, amended claim 31 is not anticipated under 35 U.S.C. §102(b) by Eckhoff.

Independent claim 39 is directed at an implant for implantation on a femoral condyle, wherein at least a portion of both the bone-facing and the joint-facing implant surface has a three-dimensional shape that is configured to substantially match the shape of at least a portion of an uncut articular surface of the femoral condyle. Thus, claim 39 is allowable over Eckhoff for at least the same reasons as amended claims 1 and 31, and is further allowable in view of the additional limitations set forth therein.

35 U.S.C. §103

Claims 3-5, 8, 9, 11, 19-25, and 44-46 stand rejected under 35 U.S.C. §103(a) as unpatentable over Eckhoff in view of U.S. Patent Publication No. 2003/0055501 (Fell et al., hereinafter "Fell '501"). Claims 6, 7, 10 and 32-38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eckhoff in view of Fell et al. U.S. Patent Publication No. 2003/0060882 (Fell et al., hereinafter "Fell '882"). Claims 15 and 27 stand rejected under 35 U.S.C. §103(a) as unpatentable over Eckhoff in view of U.S. Patent Publication No. 2004/0167630 (Rolston).

As stated above, Eckhoff fails to teach or suggest a joint-facing or bone-facing implant surface having a three-dimensional shape that substantially matches the shape of at least a portion of an uncut articular surface that the bone-facing surface of the implant abuts, as required by claims 3-11, 15, 19-25, 27, 32-38 and 44-46. Neither Fell '501, Fell '882, nor Rolston teach such a limitation. Since none of these references teach this required limitation of claims 3-11, 15, 19-25,

27, 32-38 and 44-46, the embodiment of claims 3-11, 15, 19-25, 27, 32-38 and 44-46 are deemed nonobvious over any combination of these references.

It is submitted that the application is in condition for allowance. Consideration of the application and issuance of a notice of allowance are respectfully requested.

It is believed that a three month extension of time is required. Applicants respectfully petition for such an extension. Authorization is hereby given to charge deposit account number 19-4972. If any additional fees are required for the timely consideration of this application, please charge deposit account number 19-4972.

Applicants request that the undersigned, Alexander J. Smolenski, Jr., be contacted if it will assist further examination of this application.

Respectfully submitted,

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